



CORPORAL JCTD

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Unclassified

Acronym Decipher



Collaborative
On-line
Reconnaissance
Provider
Operationally
Responsive
Attack
Link

Joint
Capability
Technology
Demonstration

JCTD Purpose:

...to demonstrate, operationally assess, rapidly deploy, and **transition capability** solutions and innovative concepts to address the joint, coalition and interagency operational gaps and shortfalls.

Key JCTD Players

JCTD Sponsor: USCENTCOM



Oversight Executive (OE):

Mr. Scott Stephens

OSD / AS&C

Lead Service:

Maj Mikel Huber HQMC DC(A)

Operational Manager (OM):

Jerry Gelling — CENTCOM J8/SA

Technical Manager (TM):

Mr. Harry Dreany NSWC Dahlgren

Transition Manager (XM):

LCDR Scott Rivera

PMA-234 (NAVAIR)



CORPORAL CONOPS



What is CORPORAL?

Technical Approach

Spiral Development to address on-demand NTISR and SA (Spiral 1) and on-demand EA and TISR (Spiral 2) to the grunt for his target area of interest.

- **Develop, integrate, and demonstrate systems capabilities affected by hardware, software, and architectures with the following characteristics: (SPIRAL 1)**
 - Scalable, IP-based, Open-Architecture, interoperable design:
 - Accommodates current and future operational systems and architectures, for example, The Enhanced Position Location Reporting System (EPLRS)
 - Integration of EPLRS and The Combat Information Network Applications System (CINAPS) server on a Litening Pod (NTISR) which facilitates rapid integration into existing systems without aircraft modification
- **Scalable situational awareness based on available bandwidth and user interface that supports missions, needs, and locations filtered and tailored to the ground warfighter (SPIRAL 1)**
 - Dismounted Digital Automated Communications Terminal (DDACT) integrated with EPLRS
 - Scalable network nodes

Technical Approach (Cont'd)

- **Plug-and-Play, software reprogrammable, scalable, IP-based, Open-Architecture non-kinetic fires solution: (SPIRAL 2)**
 - Provide the EW SOA
 - Provide TISR via UAS imagery
 - Integration of Electronic Attack (EA) payload onto a surrogate UAS
 - Transition target platform configuration is a Shadow 200 rewinged platform, with the payload delivered in a dual pod configuration
 - The design of the pod concurrent with surrogate integration and test.

Core Technologies

- LITENING Pod PNPII;
 - NGC TRL 7-9; Low risk; Demonstrated in TD-1 on the Harrier (AV-8B); integrated on F-18; EA-6B Testing
- Transition Target UAS Configuration:
 - Shadow RQ-7B Re-wing; Low - Medium transition risk. TRL 7-9
- Network Components:
 - NGC -Combat Information Network Application Systems (CINAPS) TRL-5-6; Low risk; Demonstrated in TD-1
- Electronic Attack Payload Systems:
 - Solution currently under review

The diagram illustrates a system architecture. At the top, a green box contains the text **FY09**. Below this, two main components are shown in boxes, separated by a plus sign (+). The left box contains the text **EW SOA Software**. The right box contains an image of a UAS (Unmanned Aerial System) and the text **UAS**. Below these components, the text **TD 1A** is displayed in large blue letters. To the right of **TD 1A**, the text **LUA** is displayed in large orange letters, and below it, the text **EU1** is displayed in large green letters. The background features a large, faded circular logo with the text "Reconnaissance" and "Operationally" and a stylized aircraft.

TD 1



TD 1A

+



TD 2 TD 3

+

LUA EU1

8

Resulting Goal

Provide “on-demand” collaborative SA & kinetic and non-kinetic fires to the small unit’s Target Area of Interest (TAI).....

- Beyond Line Of Sight (**BLOS**) **connectivity** to ground forces leveraging manned and unmanned assets
- Near real-time direct delivery of **time/space relevant information**
 - Tailored to small unit request (battlefield fusion) optimizing available bandwidth
- **Scalable** - from distributed small unit operations to major combat operations
- Rules based software algorithm-arbitrated deconfliction of kinetic and non-kinetic fires **coordination**
- On-demand, **automated EA** , where available, considering frequency deconfliction, ground specificity and asset availability/proximity
- **Request forwarding** to appropriate approval authority for all non-sourced requests
- **Communications agnostic framework** adaptable to current and planned waveforms and IP-based, open architecture networks

Questions



BACKUP

